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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,045	08/01/2003	David Randolph Smith	101.0021 US CON	4716

7590 07/01/2004  
Schlumberger Technology Corporation  
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EXAMINER

BEACH, THOMAS A

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/633,045

Applicant(s)

SMITH, DAVID RANDOLPH

Examiner

Thomas A Beach

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," "The invention is disclosed" etc.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 17, 19-23, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Messenger 4,191,250. Messenger shows a subsea well construction, having a casing string disposed in a subsea well; a production string disposed in the casing string, an alternative path 1 conduit disposed exterior to the production string, the alternative path conduit passing through a subsea wellhead, and at least one sensor

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9 deployed in the alternative path conduit, the at least one sensor adapted to measure a parameter of interest (col. 2, lines 5-30).

As concerns claim 2, Messenger shows the alternative path conduit is proximate to the casing string (figure 1).

As concerns claim 3, Messenger shows the alternative path conduit is exterior to the casing string (figure 1).

As concerns claim 4, Messenger shows the alternative path conduit is cemented in place.

As concerns claim 5, Messenger shows the parameter of interest is one of temperature, distributed temperature, *pressure* (col. 6, lines 5-30), distributed pressure, acoustic energy, electric current, magnetic field, electric field, flow, chemical properties, or a combination thereof.

As concerns claim 17, Messenger shows at least one sensor is an electrical sensor 9 (connected with electrical elements 5 & 19).

As concerns the method claims 19-25 and 35, they are rejected in view of being an inherent method to the apparatus noted above in the rejection of claims 1-18.

4. Claims 1-3 and 5-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Kluth et al 5,992,250. Kluth shows, figure 16-17, a subsea well construction (col. 13, lines 54-65), having a casing string 1631 disposed in a subsea well; a production string 1633 disposed in the casing string, an alternative path 1635 conduit disposed exterior to the production string, the alternative path conduit passing through a subsea wellhead,

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and at least one sensor 1610 deployed in the alternative path conduit, the at least one sensor adapted to measure a parameter of interest.

As concerns claim 2, Kluth shows the alternative path conduit is proximate to the casing string (figures 16-17).

As concerns claim 3, Messenger shows the alternative path conduit is exterior to the casing string (figures 16-17).

As concerns claim 5, Messenger shows the parameter of interest is one of temperature, distributed temperature, pressure (col. 12, lines 65-7), distributed pressure, acoustic energy, electric current, magnetic field, electric field, flow, chemical properties, or a combination thereof.

As concerns claim 6, Kluth shows the at least one sensor comprises an optical fiber (col. 1, lines 55-61).

As concerns claim 7, Kluth shows the optical fiber is deployed in the alternative path conduit by use of frictional fluid force(col. 1, lines 55-61)..

As concerns claim 8, Kluth shows the at least one sensor comprises a distributed temperature sensor of which the optical fiber is a part thereof (col. 1, lines 55-61)..

As concerns claim 9, Kluth shows the distributed temperature sensor measures the thermal profile of at least part of the subsea well (col. 1, lines 55-61)..

As concerns claim 10, Kluth shows the distributed temperature sensor utilizes optical time domain reflectometry to measure the thermal profile (col. 1, lines 55-61)..

As concerns claim 11, Kluth shows the thermal profile is used for one of providing inflow conformance, monitoring well production, monitoring well integrity,

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detecting leaks in the casing string or production tubing, or monitoring of gas lift valves (col. 1, lines 55-61).

As concerns claim 12, Kluth shows the optical fiber is used for one of providing inflow conformance, monitoring well production, monitoring well integrity, detecting leaks in the casing string or production tubing, or monitoring of gas lift valves(col. 1, lines 55-61).

As concerns claim 13, Kluth shows the at least one sensor comprises at least two optical fibers.

As concerns claim 14, Kluth shows the at least two optical fibers comprise a multimode optical fiber and a single mode optical fiber (col. 1, lines 55-61)..

As concerns claim 15, Kluth shows the at least one sensor is included on an optical fiber disposed in the alternative path conduit (col. 1, lines 55-61)..

As concerns claim 16, Kluth shows the at least one sensor is a fiber optic sensor (col. 1, lines 55-61)..

As concerns claim 17, Kluth shows at least one sensor is an electrical sensor (col. 1, lines 55-61).

As concerns claim 18, Kluth shows the alternative path conduit has a u- shape (figures 16-17).

As concerns the method claims 19-21 and 23-36, they are rejected in view of being an inherent method to the apparatus noted above in the rejection of claims 1-18.

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***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

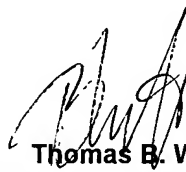
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A Beach whose telephone number is 703.305.4848. The examiner can normally be reached on Monday-Thursday, 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will can be reached on 703.308.3870. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9306 or 703.872.9306 for regular communications and 703.872.9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.306.4198.

Thomas A. Beach

June 27, 2004



**Thomas B. Will**  
Supervisory Patent Examiner  
Group 3600